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| APPLICATION NO.           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------|-------------|----------------------|---------------------|------------------|
| 10/790,816                | 03/03/2004  | Terry L. Gilton      | M4065.0607/P607-A   | 1483             |
| 24998                     | 7590        | 08/08/2006           | EXAMINER            |                  |
| DICKSTEIN SHAPIRO LLP     |             |                      | DOTY, HEATHER ANNE  |                  |
| 1825 EYE STREET NW        |             |                      | ART UNIT            |                  |
| Washington, DC 20006-5403 |             |                      | PAPER NUMBER        |                  |
|                           |             |                      | 2813                |                  |

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/790,816

Applicant(s)

GILTON, TERRY L.

Examiner

Heather A. Doty

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27,49 and 50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27,49 and 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/11/2006 has been entered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 27, 49, and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Kozicki (U.S. 2003/0035315).

Regarding claim 27, Kozicki teaches an intermediate structure for an array of resistance-variable memory cells comprising at least one pillar of stacked material layers on a semiconductor substrate (paragraph 0096 teaches the pillar may be formed on a substrate, paragraph 0044 discusses the use of semiconductor substrates), the stacked layers comprising a first electrode layer (2110 in Fig. 21), a chalcogenide glass layer having metal ions diffused therein and being capable of changing resistance under

the influence of an applied voltage (**2140** in Fig. 21; paragraphs 0058-0059), and a second electrode layer (**2120** in Fig. 21), the at least one pillar not located within a via (paragraph 0096 expressly teaches that this structure may be formed on a substrate or within a via, disclosing an embodiment of the pillar not formed within a via).

Regarding claim 49, Kozicki teaches the array of claim 27, and further teaches that the metal ions comprise silver ions (paragraph 0059).

Regarding claim 50, Kozicki teaches the array of claim 27, and further teaches that one of the first and second electrodes is tungsten (paragraph 0056).

### ***Response to Arguments***

Applicant's arguments filed 7/11/2006 have been fully considered but they are not persuasive. Regarding claim 27, Applicant argues that Kozicki only teaches pillars that are located within a via (paragraph bridging pp. 3 and 4). While it is true that most of the embodiments taught by Kozicki comprise pillars located within a via, paragraph 0096 teaches a pillar (shown in Fig. 21) that can be formed within a via, or alternatively, on a substrate. Therefore, not every embodiment taught by Kozicki comprises a pillar located within a via.

### ***Conclusion***

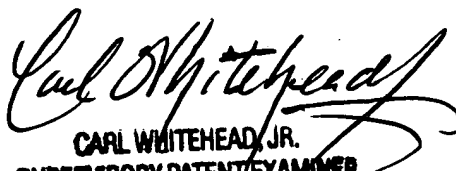
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Troyan (U.S. 5,363,329) teaches a resistance-variable memory cell comprising a pillar not located within a via, the pillar comprising a first electrode, a chalcogenide glass layer, and a second electrode.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather A. Doty, whose telephone number is 571-272-8429. The examiner can normally be reached on M-F, 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached at 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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CARL WHITEHEAD, JR.  
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